

**Commonwealth of Kentucky
Energy and Environment Cabinet
Department for Environmental Protection
Division for Air Quality
803 Schenkel Lane
Frankfort, Kentucky 40601
(502) 573-3382**

**AIR QUALITY PERMIT
Issued under 401 KAR 52:040**

Permittee Name: Cytech Products, Inc.
Mailing Address: 906 Peterson Dr., Elizabethtown, KY-42701

Source Name: Cytech Products, Inc.
Mailing Address: 906 Peterson Dr., Elizabethtown, KY-42701

Source Location: 906 Peterson Dr., Elizabethtown, KY-42701

Permit ID: S-08-031
Agency Interest #: 1656
Activity ID: APE20080001
Review Type: Minor Source, Operating
Source ID: 21-093-00057

Regional Office: Frankfort Regional Office
663 Teton Trail
Frankfort, KY 40601
(502) 564-3358

County: Hardin

Application
Complete Date: June 26, 2008
Issuance Date: July 23, 2008
Revision Date:
Expiration Date: July 23, 2018



**John S. Lyons, Director
Division for Air Quality**

SECTION A - PERMIT AUTHORIZATION

Pursuant to a duly submitted application the Kentucky Division for Air Quality hereby authorizes the operation of the equipment described herein in accordance with the terms and conditions of this permit. This permit has been issued under the provisions of Kentucky Revised Statutes Chapter 224 and regulations promulgated pursuant thereto.

The permittee shall not construct, reconstruct, or modify any affected facilities without first submitting a complete application and receiving a permit for the planned activity from the permitting authority, except as provided in this permit or in 401 KAR 52:040, State-origin permits.

Issuance of this permit does not relieve the permittee from the responsibility of obtaining other permits, licenses, or approvals that may be required by the Cabinet or other federal, state, or local agencies.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

Emission Point 09(B2) – Indirect Heat Exchanger (Natural Gas fired Boiler)

Description:

Bryan Boilers Model K450-S-150-GI Natural gas fired steam boiler	
Fuel:	Natural gas
Date installed:	August 2000
Rated Capacity:	4.5 mmBtu/hr
Control Equipment:	None
Maximum annual fuel usage rate:	41 mmCFH
Stack ID:	S09

APPLICABLE REGULATIONS

401 KAR 59:015, *New Indirect Heat Exchangers* - applies to the particulate matter and sulfur dioxide emissions for each indirect heat exchanger commenced on or after April 9, 1972.

1. Operating Limitations:

None

2. Emission Limitations:

- a) Pursuant to 401 KAR 59:015, Section 4(1)(a), emissions of particulate matter (PM) from the combustion of natural gas shall not exceed 0.56 lb/mmBtu actual heat input.
- b) Pursuant to 401 KAR 59:015, Section 4(2), emissions from EP09(B2) shall not exceed 20% opacity based on a six minute average, except that a maximum of 40% opacity based on a six minute average shall be permissible for not more than six consecutive minutes in any 60 consecutive minutes during cleaning the fire-box or blowing soot and except for emissions during building a new fire for the period required to bring the boiler up to operating conditions provided the method used is that recommended by the manufacturer and the time does not exceed the manufacturer's recommendations.
- c) Pursuant to 401 KAR 59:015, Section 5(1)(a), emissions of sulfur dioxide from the combustion of natural gas shall not exceed 3.0 lb/mmBtu actual heat input.

Compliance Demonstration Method:

Compliance with the particulate, opacity, and sulfur dioxide emission limit is demonstrated when burning natural gas.

3. Testing Requirements:

Pursuant to 401 KAR 59:005 Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in 401 KAR 50:015 shall be conducted as required by the Division.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

4. Monitoring Requirements:

None

5. Recordkeeping Requirements:

During periods of each boiler startup, shutdown or malfunction, a daily (calendar day) log of the following information shall be kept:

- i. Whether any air emissions were visible from the boiler stack.
- ii. Whether the visible emission were normal for the process.
- iii. The color of the emissions and whether the emissions were light or heavy.
- iv. The cause of the abnormal visible emissions.
- v. Any corrective actions taken.

6. Specific Reporting Requirements:

See Section C (3) a, b & c.

7. Specific Control Equipment Operating Conditions:

None

8. Alternate Operating Scenarios:

None

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Unit: Mixing tanks

KY EIS	Tank ID/ date installed	Type of pollutant	Process Weight Rate (tons/hr)	Hours of operation	Control device	Allowable Particulate Emission Rate (lb/hr)	Maximum Controlled Emissions (lb/hr)
01-01	T1 1988	PM(paraffin) PM ₁₀ VOC and HAPs	0.4875	8760	none	2.34	9.8 x10 ⁻⁴ 4.9 x10 ⁻⁴ 9.75 0.018
02-01	T-7 1988	PM = PM ₁₀	0.19	8760	filter	2.34	6.5 x10 ⁻⁵
02-02	T-7 methylcell 1988	PM = PM ₁₀	0.008	8760	filter	2.34	1.2 x10 ⁻⁵
08-01	H-1 1989	PM = PM ₁₀	0.19	8760	filter	2.34	6.5 x10 ⁻⁵
05-01	E-3 1988	PM(paraffin) PM ₁₀	0.16	8760	none	2.34	3.2 x10 ⁻⁴ 1.6 x10 ⁻⁴
06-2	E-2 1989	PM = PM ₁₀	0.16	8760	none	2.34	5.4 x10 ⁻³

Closed units and closed process to send filter treated air stream back to the process, there are no stacks or particulate emissions.

APPLICABLE REGULATIONS:

401 KAR 59:010, *New Process Operations*, commenced on or after July 2, 1975, applies to the emissions of particulate matter from the processing operations.

State-only requirement:

401 KAR 63:020, *Potentially hazardous matter or toxic substances* applies to the emissions of potentially hazardous matter or toxic substances from the processing operations.

1. Operating Limitations:

Pursuant to 401 KAR 63:020 Section 3:

Persons responsible for a source from which hazardous matter or toxic substances may be emitted shall provide the utmost care and consideration, in the handling of these materials, to the potentially harmful effects of the emissions resulting from such activities. No owner or operator shall allow any affected facility to emit potentially hazardous matter or toxic substances in such quantities or duration as to be harmful to the health and welfare of humans, animals and plants.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

The source is in compliance with 401 KAR 63:020 based on the rates of emissions of airborne toxics provided in the application submitted by the source. If the source alters processes, process rates, material formulations, or any other factor that would result in increased emissions of these previously evaluated airborne toxics, or the emission of airborne toxics not previously evaluated by the Division, the source shall submit the appropriate application forms pursuant to 401 KAR 52:020, Section 3(1)(a).

2. Emission Limitations:

- a. Opacity of visible emissions from emission points shall not equal or exceed 20%. [401 KAR 59:010 Section 3(1)(a)].
- b. Emissions of particulate matter from each of the emission points 01-01, 02-01, 02-02, 05-01, 06-02 and 08-01 shall not exceed 2.34 lb/hr. [401 KAR 59:010 Appendix A].

Compliance Demonstration Method:

Maintenance of the enclosures and the closed system shall be according to standard operating procedures.

3. Testing Requirements:

Pursuant to 401 KAR 50:045, the cabinet may require the owner or operator of any affected facility to sample emissions in accordance with such methods, as the cabinet shall prescribe.

4. Specific Monitoring Requirements:

None

5. Specific Recordkeeping Requirements:

None

6. Specific Reporting Requirements:

Refer to Section C (3).

7. Specific Control Equipment Operating Conditions:

None

8. Alternate Operating Scenarios:

None

SECTION C - GENERAL CONDITIONS

1. Administrative Requirements

- a. The permittee shall comply with all conditions of this permit. Noncompliance shall be a violation of 401 KAR 52:040, Section 3(1)(b) and is grounds for enforcement action including but not limited to the termination, revocation and reissuance, or revision of this permit.
- b. This permit shall remain in effect for a fixed term of ten (10) years following the original date of issue. Permit expiration shall terminate the source's right to operate unless a timely and complete renewal application has been submitted to the Division at least six months prior to the expiration date of the permit. Upon a timely and complete submittal, the authorization to operate within the terms and conditions of this permit, including any permit shield, shall remain in effect beyond the expiration date, until the renewal permit is issued or denied by the Division. [401 KAR 52:040, Section 15].
- c. Any condition or portion of this permit which becomes suspended or is ruled invalid as a result of any legal or other action shall not invalidate any other portion or condition of this permit [Section 1a-11 of the *Cabinet Provisions and Procedures for Issuing State-Origin Permits* incorporated by reference in 401 KAR 52:040 Section 23].
- d. Pursuant to materials incorporated by reference by 401 KAR 52:040, this permit may be revised, revoked, reopened, reissued, or terminated for cause. The filing of a request by the permittee for any permit revision, revocation, reissuance, or termination, or of a notification of a planned change or anticipated noncompliance shall not stay any permit condition [Section 1a-4, 5, of the *Cabinet Provisions and Procedures for Issuing State-Origin Permits* incorporated by reference in 401 KAR 52:040 Section 23].
- e. This permit does not convey property rights or exclusive privileges [Section 1a-8 of the *Cabinet Provisions and Procedures for Issuing State-Origin Permits* incorporated by reference in 401 KAR 52:040 Section 23].
- f. Nothing in this permit shall alter or affect the liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance [401 KAR 52:040 Section 11(3)].
- g. All previously issued permits to this source at this location are hereby null and void.

2. Recordkeeping Requirements

- a. Records of all required monitoring data and support information, including calibrations, maintenance records, and original strip chart recordings, and copies of all reports required by the Division for Air Quality, shall be retained by the permittee for a period of at least five years and shall be made available for inspection upon request by any duly authorized representative of the Division for Air Quality [401 KAR 52:040 Section 3(1)(f) and Section 1b-IV-2 of the *Cabinet Provisions and Procedures for Issuing State-Origin Permits* incorporated by reference in 401 KAR 52:040 Section 23].

SECTION C - GENERAL CONDITIONS (CONTINUED)

- b. The permittee shall perform compliance certification and recordkeeping sufficient to assure compliance with the terms and conditions of the permit. Documents, including reports, shall be certified by a responsible official pursuant to 401 KAR 52:040, Section 21.

3. Reporting Requirements

- a. (1) In accordance with the provisions of 401 KAR 50:055, Section 1, the permittee shall notify the Regional Office listed on the front of this permit concerning startups, shutdowns, or malfunctions as follows:
 - i. When emissions during any planned shutdowns and ensuing startups will exceed the standards, notification shall be made no later than three (3) days before the planned shutdown, or immediately following the decision to shut down, if the shutdown is due to events which could not have been foreseen three (3) days before the shutdown.
 - ii. When emissions due to malfunctions, unplanned shutdowns and ensuing startups are or may be in excess of the standards, notification shall be made as promptly as possible by telephone (or other electronic media) and shall be submitted in writing upon request.
- (2) The permittee shall promptly report deviations from permit requirements including those attributed to upset conditions (other than emission exceedances covered by Reporting Requirement condition a.(1) above), the probable cause of the deviation, and corrective or preventive measures taken; to the Regional Office listed on the front of this permit within 30 days. Other deviations from permit requirements shall be included in the semiannual report [Section 1b-V-3 of the *Cabinet Provisions and Procedures for Issuing State-Origin Permits* incorporated by reference in 401 KAR 52:040 Section 23].
- b. The permittee shall furnish information requested by the Cabinet to determine if cause exists for modifying, revoking and reissuing, or terminating the permit; or to determine compliance with the permit [Section 1a-6 of the *Cabinet Provisions and Procedures for Issuing State-Origin Permits* incorporated by reference in 401 KAR 52:040 Section 23].
- c. Summary reports of monitoring required by this permit shall be submitted to the Regional Office listed on the front of this permit at least every six (6) months during the life of this permit. For emission units that were still under construction or which had not commenced operation at the end of the 6-month period covered by the report and are subject to monitoring requirements in this permit, the report shall indicate that no monitoring was performed during the previous six months because the emission unit was not in operation. The summary reports are due January 30th and July 30th of each year. All deviations from permit requirements shall be clearly identified in the reports. All reports shall be certified by a responsible official pursuant to 401 KAR 52:040, Section 21.

SECTION C - GENERAL CONDITIONS (CONTINUED)

4. Inspections

In accordance with the requirements of 401 KAR 52:040, Section 3(1)(f) the permittee shall allow authorized representatives of the Cabinet to perform the following during reasonable times. Reasonable times are defined as during all hours of operation, during normal office hours; or during an emergency:

- a. Enter upon the premises to inspect any facility, equipment (including air pollution control equipment), practice, or operation.
- b. To access and copy any records required by the permit.
- c. Inspect, at reasonable times, any facilities, equipment (including monitoring and pollution control equipment), practices, or operations required by the permit.
- d. Sample or monitor, at reasonable times, substances or parameters to assure compliance with the permit or any applicable requirements.

5. Emergencies/Enforcement Provisions

- a. The permittee shall not use as defense in an enforcement action, the contention that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance [Section 1a-3 of the *Cabinet Provisions and Procedures for Issuing State-Origin Permits* incorporated by reference in 401 KAR 52:040 Section 23].
- b. An emergency shall constitute an affirmative defense to an action brought for the noncompliance with the technology-based emission limitations if the permittee demonstrates through properly signed contemporaneous operating logs or relevant evidence that:
 - (1) An emergency occurred and the permittee can identify the cause of the emergency;
 - (2) The permitted facility was at the time being properly operated;
 - (3) During an emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and
 - (4) The permittee notified the Division as promptly as possible and submitted written notice of the emergency to the Division within two working days after the time when emission limitations were exceeded due to the emergency and included a description of the emergency, steps taken to mitigate emissions, and corrective actions taken.
- c. Emergency provisions listed in General Condition 5.b are in addition to any emergency or upset provision contained in an applicable requirement [401 KAR 52:040, Section 22(1)].
- d. In an enforcement proceeding, the permittee seeking to establish the occurrence of an emergency shall have the burden of proof. [401 KAR 52:040, Section 22(2)].

SECTION C - GENERAL CONDITIONS (CONTINUED)

6. Compliance

- a. Periodic testing or instrumental or non-instrumental monitoring, which may consist of record keeping, shall be performed to the extent necessary to yield reliable data for purposes of demonstration of continuing compliance with the conditions of this permit. For the purpose of demonstration of continuing compliance, the following guidelines shall be followed:
 - (1) Pursuant to 401 KAR 50:055, General compliance requirements, Section 2(5), all air pollution control equipment and all pollution control measures proposed by the application in response to which this permit is issued shall be in place, properly maintained, and in operation at any time an affected facility for which the equipment and measures are designed is operated, except as provided by 401 KAR 50:055, Section 1.
 - (2) All the air pollution control systems shall be maintained regularly in accordance with good engineering practices and the recommendations of the respective manufacturers. A log shall be kept of all routine and nonroutine maintenance performed on each control device. Daily observations are required during daylight hours of all operations, control equipment and any visible emissions to determine whether conditions appear to be either normal or abnormal. If the operations, controls and/or emissions appear to be abnormal, the permittee must then comply with the requirements of Section C – General Conditions, 3.a.(2), of this permit.
 - (3) A log of the monthly raw material consumption and monthly production rates shall be kept available at the facility. Compliance with the emission limits may be demonstrated by computer program, spread sheets, calculations or performance tests as may be specified by the Division [401 KAR 50:055, Section 2].
- b. Pursuant to 401 KAR 52:040, Section 19, the permittee shall certify compliance with the terms and conditions contained in this permit by January 30th of each year, by completing and returning a Compliance Certification Form (DEP 7007CC) (or an approved alternative) to the Regional Office listed on the front of this permit in accordance with the following requirements:
 - (1) Identification of the term or condition;
 - (2) Compliance status of each term or condition of the permit;
 - (3) Whether compliance was continuous or intermittent;
 - (4) The method used for determining the compliance status for the source, currently and over the reporting period, and
 - (5) For an emissions unit that was still under construction or which has not commenced operation at the end of the 12-month period covered by the annual compliance certification, the permittee shall indicate that the unit is under construction and that compliance with any applicable requirements will be demonstrated within the timeframes specified in the permit.

SECTION C - GENERAL CONDITIONS (CONTINUED)

- (6) The certification shall be postmarked by January 30th of each year. Annual compliance certifications shall be mailed to the following addresses:

Division for Air Quality
Regional Office
663 Teton Trail,
Frankfort, KY 40601

Division for Air Quality
Central Files
803 Schenkel Lane
Frankfort, KY 40601-1403

- c. Permit Shield - A permit shield shall not protect the owner or operator from enforcement actions for violating an applicable requirement prior to or at the time of permit issuance. Compliance with the conditions of this permit shall be considered compliance with all:
- (1) Applicable requirements that are included and specifically identified in this permit; or
 - (2) Non-applicable requirements expressly identified in this permit [401 KAR 52:040, Section 11].

SECTION D - INSIGNIFICANT ACTIVITIES

The following listed activities have been determined to be insignificant activities for this source pursuant to 401 KAR 52:040, Section 6. Although these activities are designated as insignificant the permittee must comply with the applicable regulation. Process and emission control equipment at each insignificant activity subject to an opacity standard shall be inspected monthly and a qualitative visible emissions evaluation made. Results of the inspection, evaluation, and any corrective action shall be recorded in a log.

<u>Description</u>	<u>Generally Applicable Regulation</u>
1. Storage tank - 2500 gallon capacity (2) ST-1 and SI-2	none
2. Storage tank – 10,000 gallon capacity (4) ST-3, ST-4, ST-5 and ST-6	none